What is claimed is:

1. A method for preparing microarrays of biological entities on a solid support, said biological entities having at least one amine reactive functional group, said method comprising the steps of:

a) treating said solid support to affix preformed dendrimeric polyamine to a surface of said solid support; and

b) microspotting biological entity-containing solution on said treated solid support under conditions effecting chemical binding of biological entities to the amine groups of said dendrimeric polyamines thereby providing a microarray of said biological entities on said solid support.

2. The method of claim 1, wherein said biological entities are selected from the group consisting of nucleic acid molecules, peptides, phages, eucaryotic cells, procaryotic cells and viruses.

3. The method of claim 1, wherein said biological entities are nucleic acid molecules.

4. The method of claim 1, wherein said dendrimeric polyamine is affixed to said solid support via physical adsorption.

5. The method of claim 1, wherein said dendrimeric polyamine is affixed to said solid support via covalent bonding.

6. The method of claim 1, wherein said dendrimeric polyamine is selected from the group consisting of symmetrical and unsymmetrical branching dendrimers,

polyamidoamine (PAMAM) dendrimers, lysine-based dendrimers and nucleic acid dendrimers.

7. The method of claim 1, wherein said dendrimeric polyamines are PAMAM dendrimers.

8. The method of claim 1, wherein said solid support is a glass slide.

9. The method of claim 4, wherein said treated solid support is stored for a predetermined time period before carrying out the microspotting step.

10. The method of claim 9, wherein said predetermined time period is at least two weeks.

11. A nucleic acid microarray comprising a solid support to which is affixed preformed dendrimeric polyamine, and a plurality of different nucleic acid probes chemically bound to said dendrimeric polyamine, said chemically bound nucleic acid probes forming a pattern of discrete microspots on said solid support, each of said microspots being composed of a different one of said nucleic acid probes.

12. A method of analyzing a test sample comprising at least one target nucleic acid molecule, comprising the steps of:

a) providing a nucleic acid microarray according to claim 1;

b) contacting said test sample with said nucleic acid microarray under conditions causing the formation of hybrids between said target nucleic acid molecule and said nucleic acid probes on said nucleic acid microarray;

c) labeling with a detectable reporter substance one member selected from the group consisting of said target nucleic acid molecule and any hybrids form in step b; and

d) detecting the occurrence of said detectable reporter substance in said nucleic acid microarray.

13. The method of claim 12, wherein said detectable reporter substance is selected from the group consisting of chemiluminescent, enzymatic, radioactive and fluorescent materials.

14. The method of claim 12, wherein said detectable reporter substance is fluorescent material.